DOUGLAS BATTERY
Connect with a leader.

Material Safety Data Sheet

24-HOUR EMERGENCY CONTACT
(336) 650-7245/7257
CHEMTREC (800) 424-9300

HMIS Hazard Rating

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0

0 Minimal Hazard
1 Slight Hazard
2 Moderate Hazard
3 Serious Hazard
4 Severe Hazard

PREPARED BY: A.L. Csontos
MANUFACTURER: Douglas Battery Manufacturing Company
Product Information (800) 368-4527

Date Revised: 1/05
500 Battery Drive, Winston-Salem, NC 27107
Internet Address www.douglasbattery.com

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SECTION 1 – IDENTITY

Common Name: **LEAD OXIDE**

Common Synonyms: Lead monoxide, lead oxide yellow, litharge, massicot, lead (II) oxide, plumbous oxide, lead protoxide

Chemical Name: Lead oxide

Chemical Family: Metallic Oxides

Product Use: Component of lead/acid batteries

Formula: PbO

DOT Shipping Name: Environmentally hazardous substance, solid, N.O.S., 9, UN3077, PGIII (Lead)

SECTION 2 – HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical & common name(s))	C.A.S.	Hazard Category	%	ACGIH TLV	OSHA PEL/TWA
Lead Oxide	1317-36-8	Acute/Chronic	72-78%	0.15 mg/m^3	0.15 mg/m^3
Lead (Metallic)	7439-92-1	Acute/Chronic	22-28%	0.15 mg/m^3	0.05 mg/m^3

This Product description or Tradename contains toxic chemicals subject to reporting requirements under Section 313 of Title III the "Superfund Amendments and Reauthorization Act" of 1986 and 40 CFR 372 and California Proposition 65.

SECTION 3 – PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point: 2680º F

Vapor Pressure: NA

Vapor Density: (Air = 1) NA

Specific Gravity: NA

Melting Point: 1634ºF @ 1atm.

Percent Volatile *by Volume* (%): None

Reactivity in Water: None

Solubility in Water: Insoluble

Appearance and Odor: Lead oxide: Red, yellow or brown powder.

Physical State: Solid, powder

PH: NA

Flash Point: NA

Flammable Limits in Air% *by Volume:* Lower NA, Upper NA

Auto-Ignition Temperature: NA

Extinguisher Media: Carbon Dioxide

Special Fire Fighting Procedures: Wear full body protective clothing, respirator, SCBA.

Unusual Fire and Explosion Hazards: Fumes and dust from molten metal or dry lead oxide powder can produce respiratory irritation.

SECTION 4 – PHYSICAL HAZARDS

Stability: Stable; Avoid mixing molten metal with water.

Incompatibility:
(Materials to Avoid) Sodium, potassium, aluminum, metal sulfides, strong oxidizers, hydrogen peroxide, hydrogen sulfides, nitrogen compounds.

Hazardous Decomposition Products: Molten metal products; When heated to decomposition emits toxic fumes of lead.

Hazardous Polymerization: Will Not Occur

SECTION 5 – HEALTH HAZARDS

Threshold Limit Value (TLV)/ Permissible exposure limit (PEL): Lead TLV 0.15 mg/m^3 PEL 0.05 mg/m^3

Signs and Symptoms of Exposure

1. Chronic: Elevated blood lead level. Tire easily, loss of appetite, nausea, irritability, metallic taste, insomnia. Toxic in nervous system, kidneys, and reproductive system.
2. Acute: Constipation, vomiting, blue line on gums, weak wrists or ankles, weight loss, yellowish skin.

Medical Conditions Generally Aggravated by Exposure: Harmful effects of lead are increased for a person with dietary deficiencies in calcium, iron, and zinc.

Routes of Entry: Inhalation, Ingestion: Eyes, skin, and mouth.

Chemical Listed as carcinogen or Potential Carcinogen: (Lead)
National Toxicology Program: Yes ☐ No ■
I.A.R.C. Monographs: Yes ■ No ☐
OSHA: Yes ☐ No ■
EPA CAG: Yes ☐ No ■

Emergency and First Aid Procedures

1. Inhalation: Remove from exposure, see physician.
2. Eyes: (Powder oxide, molten metal): Wash eyes with copious quantities of running water for 15 minutes. Obtain medical attention.
3. Skin: (Molten metal)-Flush area with running water. Remove contaminated clothing and obtain medical attention.
4. Ingestion: See physician.

SECTION 6 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: PAPR, full face or half face mask respirator with HEPA cartridges.

Ventilation: Local exhaust for melting or burning lead and pasting areas.

Protective Gloves: Heat resistant gloves and arm coverings in molten lead areas.

Eye Protection: Safety glasses with side shield or face shield.

Other Protective Equipment: Full body clothing should be worn in lead areas and laundered after each use.

SECTION 7 – SPECIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES

Precautions to Be Taken: Store lead oxide in a dry area with little air movement. Do not breathe dust. Monitor ambient air for work exposure, control exposure to OSHA PEL levels for workers by ventilation or approved respiratory protection. Wash hands, arms, and face thoroughly before eating, drinking, or smoking.

Other Precautions: Street clothing, food, drinks, cosmetics, and tobacco products should be stored in non-lead contaminated areas.

Material Spills or Release: Dry material should be vacuumed or wetted and swept up without creating dust. Do not dry sweep or use compressed air. Residue may be picked up by wet mopping with dilute solution of acetic acid or vinegar.

Waste Disposal Methods: Dispose of toxic substances and hazardous wastes in accordance with local, state, and federal regulations.
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